

New discovery of the male *Cnodalia ampliabdominis* (Song, Zhang & Zhu, 2006) (Araneae: Araneidae) from China

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** Deceased

Abstract — A Chinese spider species, *Pronoides ampliabdominis* Song, Zhang & Zhu, 2006, is newly transferred to the genus *Cnodalia* Thorell, 1890. The male is described and illustrated here for the first time.

Key words — Araneidae, *Cnodalia*, new combination, new discovery of male, China.

Introduction

The orb weaver spider genus *Cnodalia* was established by Thorell (1890), based on a single specimen, *Cnodalia harpax* Thorell 1890, from Sumatra, Indonesia, as the type species. After more than 100 years from the original description, Tanikawa (2006, 2007a, b, 2009) redescribed the genus and species from Japan. Mi, Peng & Yin (2010) reported the genus *Cnodalia* from China for the first time, and added two new species, *C. quadrituberculata* and *C. flavescens*. To date, the genus *Cnodalia* has three species (Platnick 2010).

Recently, we had an opportunity to examine the holotype of *Pronoides ampliabdominis* Song, Zhang & Zhu, 2006, collected from Fanjing Mountain, Guizhou Province, China. As a result of our study, we found the specimen having the abdomen wider than long and the prolateral one of the upper claws extremely the length on tarsi I and II. These characteristics do not conform to the generic characteristics of *Pronoides* but rather to the diagnosis of *Cnodalia*. Therefore we here transfer this species from *Pronoides* to *Cnodalia* as a new combination. In addition, we describe the male of *Cnodalia ampliabdominis* for the first time.

Materials and methods

All specimens are preserved in 75% alcohol. They were examined and illustrated under a Tech XTL-II stereomicroscope equipped with an Abbe drawing device. All measurements are given in millimeters. Carapace length was measured from the anterior margin to the rear margin of the carapace medially. Total length is the sum of carapace and abdomen length, regardless of the petiolus. Eye sizes are measured as the maximum diameter in a dorsal view. Leg measurements are shown as: total length (femur + patella + tibia + metatarsus + tarsus). Abbreviations used in the text: ALE, anterior lateral eye; AME, anterior median eye; MOA, median ocular area; PLE, posterior lateral eye;

PME, posterior median eye.

The specimens examined in this study are deposited in the Museum of Hebei University, Baoding, China (MHBU).

Taxonomy

Genus *Cnodalia* Thorell, 1890

Cnodalia Thorell 1890: 116. Type species: *Cnodalia harpax* Thorell 1890 (female holotype from Sumatra, preserved in Museo Civico di Storia Naturale, Giacomo Doria, Genova, not examined); Murphy & Murphy 2000: 89; Tanikawa 2006: 21; Tanikawa 2007a: 71; Tanikawa 2007b: 89; Tanikawa 2009: 463; Mi, Peng & Yin 2010: 60.

Diagnosis. This genus resembles *Pronoides* Schenkel, 1936, but can be distinguished from the latter by the abdomen wider than long and by the prolateral one of the upper claws extremely long on tarsi I and II (Fig. 10).

Description. Small-size, about 2.5–4.1 mm in length. Carapace black or dark brown, longer than wide. Cervical groove distinct. Cephalic region raised posteriorly, with setae. Both eye rows recurved. MOA trapezoidal, wider than long, wider in front than in back, PME largest. Clypeal height slightly greater than AME diameter. Chelicerae strong, promargin of fang furrow with four teeth and retromargin with three teeth. Prolateral one of the upper claws extremely long on tarsi I and II. Femur I of the male with 2–3 long spines anteriorly. Leg formula: 1243. Abdomen wider than long, dark brown, dorsum with one or two pairs of humps in females, and absent or with a pair of humps in males. Epigynum with a short, lingulate scape. The embolus of male palp curved; median apophysis with distal spine; conductor membranous; terminal apophysis broad.

Distribution. China, Indonesia and Japan.

Cnodalia ampliabdominis (Song, Zhang & Zhu, 2006)
comb. nov.
 (Figs. 1–10)

Pronoides ampliabdominis Song, Zhang & Zhu, 2006: 675, fig. 113.1–4.

Type material. Holotype female, Fanjing Mountain (28°02'N, 108°15'E), Guizhou Province, China, July 28, 2001, Zhi-Sheng Zhang leg. (MHBUS) (examined).

Material examined. One male, Sanqiao town (29°03'N, 107°30'E), Daozhen County, Guizhou Province, China, May 24, 2004, Zhi-Sheng Zhang leg.; one female, Tianlin County (24°23'N, 106°09'E), Guangxi Province, China, May 29, 2002, Chao Zhang leg.; one male, Diaoluoshan National Nature Reserve (18°39'N, 109°55'E), Lingshui County, Hainan Province, China, December 17, 2003, Ming-Sheng Zhu leg. (All specimens in MHBUS).

Diagnosis. This species resembles *Cnodalia harpax* Thorell, 1890, but can be distinguished from the latter by

following characteristics (*C. harpax* in parenthesis): (1) anterior edge of scape of epigynum rounded from ventral view, scape cambered from posterior view (anterior edge of scape level from ventral view, scape M-shaped from posterior view); (2) copulatory duct not coiled (copulatory duct coiled); (3) embolus of male palp longer and more curved (short and straight); (4) median apophysis of male palp with a slender distal spine (distal spine short).

Description. Female (holotype). Total length 3.47. Cephalothorax length 1.35, width 1.17; abdomen length 2.48, width 3.24. Carapace black, cervical groove distinct. Cephalic region raised posteriorly, with hairs. Both eye rows recurved. Eyes measurements: AME 0.12, ALE 0.09, PME 0.11, PLE 0.09; AME-AME 0.16, AME-ALE 0.23, PME-PME 0.22, PME-PLE 0.30; MOA length 0.29, anterior width 0.31, posterior width 0.39. Chelicerae dark red-brown, promargin of fang furrow with four teeth and retromargin with three teeth. Labium and endites dark brown, inner margins light yellow. Sternum and legs dark brown. Leg measurements: I 3.84 (1.36 + 0.51 + 0.85 + 0.66 + 0.46); II 3.74 (1.33 + 0.50 + 0.79 + 0.68 +

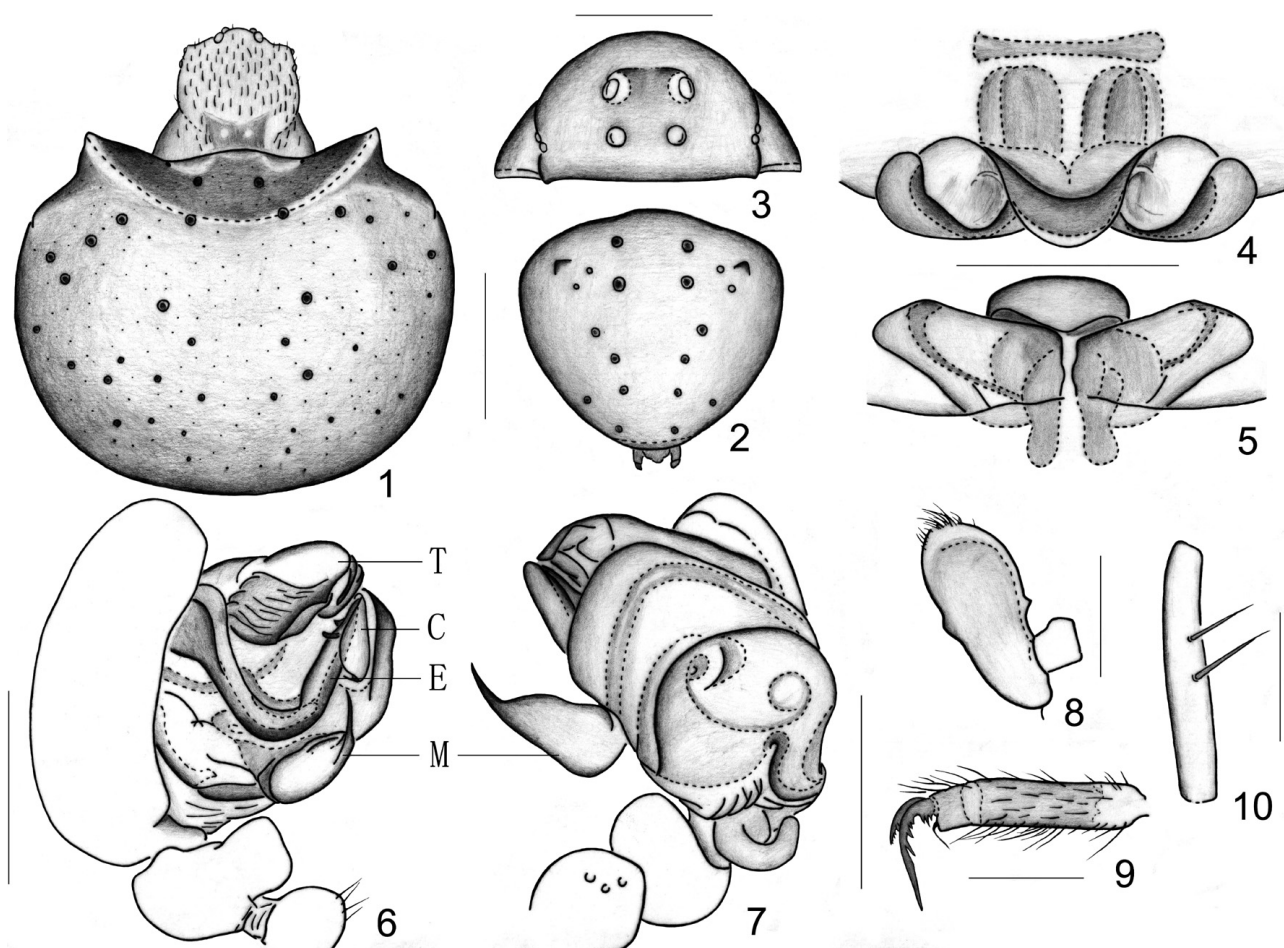


Fig. 1–10. *Cnodalia ampliabdominis* (Song, Zhang & Zhu, 2006) comb. nov., female holotype (1, 3–5, 9) and male (from Sanqiao town) (2, 6–8, 10). —1, body, dorsal view; 2, abdomen, dorsal view; 3, carapace, frontal view; 4, epigynum, ventral view; 5, same, posterior view; 6, left palp, prolateral view; 7, same, retrolateral view; 8, left endite, ventral view; 9, tarsus I, prolateral view; 10, femur I, ventral view. Abbreviations: C, conductor; E, embolus; M, median apophysis; T, terminal apophysis. Scale bars: 1.0 mm (1–2), 0.5 mm (3, 10), 0.2 mm (4–9).

0.44); III 2.11 (0.71 + 0.30 + 0.45 + 0.41 + 0.24); IV 3.22 (1.09 + 0.37 + 0.74 + 0.68 + 0.34). Leg formula: 1243. Abdomen oval, wider than long; dorsum dark brown, scattering with many dark brown round spots, with a pair of horn-shaped humps anteriorly; venter brown.

Epigynum (Figs. 4–5): scape short and lingulate; copulatory duct not coiled; with two pairs of spermathecae, globular and almost equal.

Male (from Sanqiao town, Daozhen County, Guizhou Province, China). Total length 2.50. Cephalothorax length 1.42, width 1.12; abdomen length 1.53, width 1.68. Endite with a small apophysis outside (Fig. 8). Eye diameter: AME 0.10, ALE 0.05, PME 0.10, PLE 0.08; AME-AME 0.15, AME-ALE 0.18, PME-PME 0.23, PME-PLE 0.25; MOA length 0.30, anterior width 0.30, posterior width 0.33. Leg measurements: I 4.24 (1.48 + 0.51 + 0.97 + 0.77 + 0.51); II 3.66 (1.36 + 0.46 + 0.82 + 0.61 + 0.41); III 1.85 (0.66 + 0.20 + 0.40 + 0.33 + 0.26); IV 2.68 (1.02 + 0.33 + 0.53 + 0.50 + 0.30). Leg formula: 1243. Coxa I without hook, Femur I with two or three long spines anteriorly (Fig. 10). Other characteristics as same as female.

Palp (Figs. 6–7): embolus thin, long and curved; median apophysis irregular, rounded, with a long distal spine; conductor membranous; terminal apophysis broad.

Distribution. China: Guangxi, Guizhou and Hainan.

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